

Individual, social, and cultural approaches to knowledge sharing

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ABSTRACT

Workplace knowledge sharing is a complex process and there are a large number of studies in the area. In this article three theoretical approaches in library and information science are used to discuss knowledge sharing in the workplace. The approaches are information behavior, social capital, and information culture, and they bring important insights that need to be considered from a holistic management point of view when it comes to knowledge sharing. The individual's relation to different levels of context is important, meaning both in relation to work roles, work tasks, situations, organizational structures, and culture. The frameworks also shed light on where and how knowledge sharing activities are present in the organization. From a knowledge management point of view, it is important to acknowledge that when knowledge is valued, there is also an awareness of the knowledge sharing activities. Also, in addition to more traditional views of context, the frameworks bring forward different views on context, such as time and space as contextual factors.

Keywords: Knowledge sharing, information behavior, social capital, information culture, workplace information practices

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1. INTRODUCTION

“Information is constructed by people in their interactions with other people, technology, and structures as they move through life and work” (Solomon 2002)

This citation by Solomon (2002) embraces many important insights. Information is not constant; it changes formats and meaning depending on situation and context. The individual is in the centre but is not isolated. When studying information and knowledge, and how it is created, communicated, and used, we need to keep these insights in mind. Knowledge sharing is a core activity in any workplace and therefore a process and practice that needs a great deal of managerial attention. This is however not always the case and knowledge processes are overlooked and often taken for granted. Obviously, there is no simple strategy for utilizing information and knowledge effectively in the workplace. We need to understand the individual, the interactions, and the contexts, all in an ongoing debate with each other.

Workplace knowledge sharing is a complex process and there is a substantial amount of research looking at motivations for knowledge sharing, the role of trust in knowledge sharing processes, how knowledge sharing affects other activities and processes in the workplace, how to develop ICT systems to support knowledge sharing, and how social networks support knowledge sharing. Most research is in organisational or business studies. To some extent we also have research about knowledge sharing in organisations in library and information science (LIS), but rarely focusing on the knowledge sharing process, rather on information and knowledge as a resource. Information culture has been one framework of research in LIS, emphasizing the role of values and attitudes to information for efficient information and knowledge sharing to happen. Information behavior among professionals is another field of study that contributes to the understanding of knowledge sharing in workplace contexts.

In this article knowledge sharing in the workplace is focused on as part of knowledge management activities. Three main approaches are discussed in connection to what affects the knowledge sharing processes in the workplace, and how they can be efficiently managed. The approaches try to grasp the complex picture explained above from a holistic point of view. First the

research framework for understanding individual information behavior is presented and how it can explain knowledge sharing in a workplace context. Second, the social capital framework is discussed to understand what affects the interactions in which information and knowledge is constructed. Finally, the broader context is focused on, information culture, in order to understand how values, attitudes, and traditions might affect knowledge sharing in the workplace. This article will discuss all these approaches of study in connection to knowledge sharing in workplace contexts to bring forward important insights from the different fields.

2. INFORMATION BEHAVIOR

For knowledge sharing to happen in a workplace it always involves activities from the individual employees. In order to understand knowledge sharing practices on a broader, organizational level, we need to start by understanding the individual information behavior and the factors that enable or hinder information and knowledge to be communicated. authors.

2.1. Information Behavior Models

Information behavior research is a multi-disciplinary area with several approaches. Information behavior research has strong traditions in studying different professional groups (Case, 2012) as well as individuals in their everyday life information seeking activities (Savolainen, 1995, 2008). Information behavior research has focused on model building based on empirical research, mainly qualitative approaches (Greifender, 2014). These frameworks aim at describing information-seeking activities or situations, causes, and consequences of that activity, or relationships among the activities (Wilson, 1999).

A general model of information behavior was presented by Wilson (1981, 1997) in which information needs are interpreted as secondary needs to satisfy a primary need (psychological, cognitive, or affective). Further, in the process of finding information to satisfy that need, we are likely to meet different kinds of barriers (personal, role-related, and environmental). In addition to that, there is a context of the information need that will affect the seeking process and its barriers, such as social roles and technological envi-

ronments. Another example of a general model was presented by Leckie, Pettigrew, and Sylvain (1996). The model explains the information seeking of professionals based on studies among doctors, nurses, engineers, and lawyers. The work focused on specific processes in the workplace and what people do in their work and how they do it. Especially, the impact of work roles and tasks, information needs, sources of information, and outcomes were emphasized. Also Foster (2004) has presented a nonlinear model describing three core processes and three levels of contextual interaction present in interdisciplinary information seeking based on an interview study with 45 academics. Foster highlights that information behavior is not isolated from the workplace context, which can be divided into external, internal, and cognitive contexts. Kuhlthau (1993, 2004) and Ellis (1989) represent linear models describing the information seeking process. In these models information seeking is described as steps and stages in which different information activities occur. Kuhlthau also includes the emotional perspective and feelings connected to different information-seeking activities.

Information behavior can further be divided into specific information-related activities and in addition to describing the broader scope of information-seeking, we have the information retrieval tradition where the models focus on the information search and retrieval processes. In these models task performance, relevance, interface, and interactivity are highlighted (Marchionini, 1995; Saracevic, 1996; Ingwersen, 1996). While the different activities within the information behavior framework are connected to a number of interrelated causes and consequences the research approaches have developed towards an integrated view. For example, Byström and Järvelin (1995) presented a work-task based framework that has contributed to both information seeking as well as information retrieval oriented research, and an integrated approach was then presented by Ingwersen and Järvelin (2005) and Järvelin and Wilson (2003).

2.2. Information Behavior and Knowledge Sharing

Knowledge sharing is one of the information activities that an employee is involved in and the information behavior models help us understand possible preferences and hindrances to engage in such an ac-

tivity. From a management point of view, information behavior research brings forward the importance of seeing the individual in context. The context is first of all his or her work role in which there are a number of barriers and enablers to finding information for specific problems or tasks. Personal factors are the first layer of barriers or enablers in this context. Understanding the different levels of roles (social roles, work roles, etc.) is important. The information seeking models point at different preferences in the different stages in the information seeking process. Knowledge sharing is also an interactive part of information seeking in the workplace and possible emotions and feelings are tightly related to how the knowledge sharing process succeeds. The information retrieval models primarily focus on human-system interaction, but can bring light to human-human interactions, for example those about relevance judgement.

When describing knowledge sharing in the workplace we can conclude that individual information behavior is an important starting point for understanding what affects the individual when it comes to information activities. Context is much underlined in the information behavior models but not elaborated to any large extent. This is not possible while the models are too complex to understand. However, the workplace is often a social context, and therefore the focus should also be on enablers and barriers for social interaction, social networking, and other social aspects to efficient knowledge sharing.

3. SOCIAL CAPITAL

Social capital has been increasingly used as a framework within LIS for studying information and knowledge practices. Social capital is defined as the benefits derived from both bonding and bridging ties (Johnson, 2015). Widén-Wulff and Ginman (2004) proposed that knowledge sharing in organizations could be explained through the dimensions of social capital and it has been proven to give a relatively good overview to the complexity that knowledge sharing entails (Hall & Widén-Wulff, 2008; Huvila, Ek, & Widén 2014; Li & Ye, 2013, Styhre, 2008; Widén-Wulff, 2007). Dividing social capital into three dimensions as presented by Hazleton and Kennan (2000) has been a popular way

of studying social capital in connection to knowledge work in organizations. The dimensions are focusing structural, relational, and content related factors.

3.1. The Structural Dimension

The structural dimension brings forward a visible layer of knowledge resources in an organization. Both formal and informal structures are important and form a basis for the collaborative knowledge processes and knowledge sharing. Structures are needed to create, expand, and exchange knowledge and to develop one's capabilities (Wenger, McDermott, & Snyder, 2002). Structures can be formal and visible where membership is clearly defined. Structures can also be informal with fuzzy boundaries. Structures, formal or informal, are usually kept together by mutual and common goals, and the structure gives access to information and knowledge (Widén-Wulff & Ginman, 2004). Timing is an important addition to the structural dimension, while time constraints affect knowledge sharing, and for example in a hectic work environment it is challenging to structure sharing in line with a specific timeline. Experts usually find their own time and place for sharing, embedded in work practices. It is then crucial to be aware of these practices for efficient knowledge management (Widén-Wulff & Davenport, 2005). In workplaces where employees have different areas of expertise the access to information sources goes through the individual experts. This means that knowledge processes through formal structures are difficult to manage. Mutual values and norms towards the importance of information and knowledge become extremely important (Widén-Wulff & Ginman, 2004; Widén-Wulff, 2007).

3.2. The Relational Dimension

Structures cannot exist if there is not something that keeps the structures together. Employees must feel that there is a benefit from belonging to a structure. As stated above, it is the common goals that usually keep the structures together and in which trust is an important ingredient. It is relatively easy to state that you need to trust that your colleagues share the right information at the right time. But how trust is shaped in practice is connected to many tacit elements, and is therefore a challenging process (Widén-Wulff, 2007). Trust is therefore probably the most studied and challenging

feature of social capital (Portes, 1998). For example, it has been studied how trust is built within a hectic business environment while traditionally trust is seen to be built over time (Mayer, Davis, & Schoorman, 1995). Trust is built from the appreciation of others' expertise when it is not possible to build trust over time or on personal preferences. This kind of knowledge network is an important asset, also shown in a study looking into managers' preferences for information in decision making (Mckenzie, 2005).

3.3. The Content Dimension

Structures are the basis for being able to organize content delivery. Relations and trust are the glue that holds structures together, both formal and informal. The content dimension is the outcome from structures and relations, bringing relevant knowledge into play in the workplace. The content dimension is about shared goals and the ability to gather, interpret, organise, store, and share information (Hazleton & Kennan, 2000; Tsai & Ghoshal, 1998). Shared goals and meaning help employees to form individual knowledge into collective goods and to transfer individual knowledge to common interests and through that contribute to organizational success (Widén-Wulff, 2007).

Again, this sounds relatively easy, but the challenge is connected to the fact that knowledge is a tacit resource and expressed in action and in unique situations and contexts (Nilsen et al., 2012). Therefore, bringing tacit knowledge to a common understanding is not a very straightforward action and has long been an important research approach in both business, management, and information sciences. Knowledge as an asset in organizations is used for sense-making, learning, and decision-making (Choo, 2006) and there is an ongoing process where knowledge is converted from tacit to explicit through externalization, combination, internalization, and socialization (Nonaka & Takeuchi, 1995) and in a life cycle from knowledge creation, knowledge sharing, and use for organizational purposes (Detlor, 2010). There is a great deal of research studying the challenges connected to the process of making tacit knowledge explicit and there are many factors brought into attention about how to support this process. For example, open cultures and active social networks involving trust and mutual goals are considered as prerequisites in this context.

3.4. Social Capital and Knowledge Sharing

To summarize, the social capital framework brings forward the importance of social structures in managing knowledge sharing processes. To manage intellectual resources, it is important to be able to utilize both tacit and explicit knowledge. Tacit knowledge can only become explicit in social interaction for which both formal and informal structures are important. Sometimes tacit knowledge cannot possibly be turned to explicit assets but still needs to be utilized, and for which social structures are needed. Further, the framework underlines that structures are not only the organizational hierarchies. Also informal structures such as timing adjust both time and space for knowledge sharing activities. The most important factor in this context is the role of trust that is built differently depending on work environment. The role of trust has also gained considerable attention while we increasingly use digital tools for knowledge sharing, in which trust is shaped differently than in the analogue environment. New social skills for knowledge sharing are needed.

4. INFORMATION CULTURE

The third perspective in this article is the cultural framework and how it might affect knowledge sharing practices in the workplace. The information culture framework helps us understand the higher level of contextual factors affecting knowledge sharing in the workplace.

4.1. The Information Culture Framework

Information culture is a framework used especially in LIS and information systems science to explain the role of information in connection to different organizational activities and outcomes. Information culture underlines the impact of organizational culture on information behavior. Information culture has been studied in connection to business success where information is seen as an intellectual resource equally important for business performance. Ginman (1988) emphasized that an information culture is a culture in which the transformation of intellectual resources is maintained alongside the transformation of material resources. Also values, norms, attitudes, and practices have been focused on as factors that reflect the existing informa-

tion culture in a workplace and influence information seeking, evaluation, communication, and use of information (Choo, 2006; Travica, 2005; Widén-Wulff & Ginman, 2004; Wright, 2013). Studies on information culture have also focused on individuals' interactions with information (Oliver, 2008) and the relationships between individuals and information in work contexts (Wright, 2013).

Information culture is described as the contextual prerequisites for information management and information use. Its role for successful IT implementation has been underlined, while an information culture in which the value and utility of information in achieving operational and strategic success is recognized is clearly an enabler for successful implementation of information systems (Curry & Moore, 2003). Information culture consists of *communication flows, cross-organizational partnerships, internal environment* (cooperativeness, openness, trust), *information systems management, information management, processes, and procedures* (Choo, Bergeron et al., 2008). Studying these aspects and the outcomes of these processes gives a good framework of understanding the complex concept of information culture.

4.2. Information Culture and Knowledge Sharing

The information culture framework brings forward the role of valuing information, e.g. attitudes to information affect how knowledge sharing is prioritized. Traditions and practices are also parts of the information culture in the workplace into which the individual adjusts his or her knowledge sharing activities. Information culture is also the framework for enabling the relationship between the individual and information work in context. It has been shown many times that new information technologies are not the answer to more efficient management of information and knowledge. Without an information culture that values information and supports positive attitudes towards new tools and practices the adoption of technologies or new practices is relatively poor. Information culture gives a practical framework for developing management practices that support effective information use and knowledge creation. A mature and enabling information culture supports better the adoption of e.g. new information systems and technologies. The key issue is not

the technology in itself but the social factors affecting individual information capabilities (Orlikowski, 2010).

5. MANAGING KNOWLEDGE SHARING

Knowledge management is a multidisciplinary field and there are several definitions of the concept (Dalkir, 2010). A common aspect in the different definitions is however that the aim of knowledge management is to ensure efficient use of the intellectual property of an organization. There are many processes and factors that are interrelated and affect the creation and use of knowledge in the organization. It is challenging to take all kinds of processes and factors into the same discussion. Therefore, in this article the knowledge sharing process is focused on and explored in the context of some larger frameworks used in the library and information science research tradition.

When studying workplace information activities and practices it is often highlighted that a holistic approach is needed. In a paper by Widén, Steinerová, and Voisey (2014) they mapped workplace information research and identified three main focuses in this area. First of all, information use and processes are highlighted where work tasks and information activities and practices are in the forefront. Sharing, collaboration, and interactivity are forms of information behavior that describe workplace information management. Further, connected to information activities and processes are different levels of contextual elements framing the workplace information behavior such as climate, culture, social, and economic factors, including tools that enable information seeking, sharing, and dissemination. Finally, the information activities involve different actors and systems called components, and the purpose of these activities is to intermediate content that exists in different forms and types. Also, in a study by Cyr and Choo (2010), they underline the individual and social dynamics of knowledge sharing and show that personal preferences are important.

The information behavior, social capital, and information culture frameworks all bring important insights that need to be considered from a holistic management point of view when it comes to knowledge sharing activities and processes. The overview of the three frameworks show that they all emphasize similar factors when explaining

what affects information and knowledge activities.

The combined analysis of the three frameworks brings some aspects to special attention.

5.1. Contextual Levels

The importance of studying information activities and practices in context is underlined, but it is important to reflect upon what context might be entailed. We know context is a relatively loose concept, and difficult to clearly define (Cool, 2001). Context is more often seen as a broader concept, the organization or even the environment in which the workplace is situated. The three frameworks presented in this article bring forward the importance of the individual's relation to different levels of context, and they also shed light on where and how knowledge sharing activities are present in the organization.

The information behavior framework underlines that the information activities are always in relation to different levels of context. It is not only the broader level of context such as an organization or society that matters, but e.g. work roles and personality are narrower contexts that are important to be aware of when managing knowledge sharing activities. What are the dynamics embedded in an employees' relation to these kinds of narrow contexts?

The social capital framework explains where knowledge sharing activities happen. Access to information and knowledge sources happen in the context of social structures. Research has shown that structures are present in many different forms and formats, formal and informal. Social networks are a central part of workplace context where different kinds of social skills are needed. Structures can also be present in more unexpected forms like time constraints.

The information culture framework puts forward a higher level of contextual factors that are relevant for knowledge sharing to happen and explains how knowledge sharing happens in an organizational context. Employees tend to share knowledge according to actual norms and traditions in the organization. The organizational culture is built from shared values and social identities (Dalkir, 2011, p. 235). Social norms are the most visible control mechanism for culture and constitute an important approach when studying and explaining knowledge sharing in the workplace. Fostering a culture where information and knowledge is valued is

a prerequisite for efficient knowledge sharing activities. The mutual aims are also part of the valuing concept and give direction to knowledge sharing activities.

When knowledge is valued, there is also an awareness of knowledge sharing activities and they are not taken for granted. There must be time and space for knowledge sharing activities. Different information cultures support knowledge sharing in different ways.

5.2. Knowledge Sharing Skills

While knowledge sharing is such an important part of developing the intellectual property of an organization it is also important to support the employees in fostering their knowledge sharing skills. The information behavior framework highlights also possible barriers to information and knowledge activities, emphasizing even more the need for good skills in connection to information activities. This overview emphasizes the importance of understanding both individual skills and contextual prerequisites. Traditionally, information handling skills are defined as being information literate. Information literacy is about understanding one's information needs, identifying reliable information sources, validating the information, and using it appropriately. It is also about analyzing critically, synthesizing, and solving problems (Johnson, 2003). In a workplace context information literacy is not equally focused on individual information skills but is rather a collective attempt at performing the tasks in workplaces (Lloyd, 2013). Being a collective approach, it includes multiple social and cultural factors that influence the information literacy activities.

The review of the three approaches, information behavior, social capital, and information culture, especially add social skills while much information and knowledge is gained through social interactions. This means that apart from the individual skills of information handling, workplace information literacy should be about navigating the organisational level of information awareness. It is important to be able to identify relevant information sources and critically evaluate information needed for problem solving as well as being fluent in navigating the IT landscape of the workplace, but in workplace contexts information literacy should also focus on aspects like attitudes and values to information, social interaction for knowledge creation, and information use outcomes. From a management

point of view this means that individual information handling skills must be supported in interaction with the workplace culture. A successful workplace information literacy programme should take a more holistic approach to information literacy where leadership aspects in connection to information handling are crucial.

6. CONCLUSIONS

We have concluded several times that knowledge sharing is much situation-bound and context-specific. Therefore, these kinds of processes must always be evaluated taking the several levels of context into consideration and from a holistic point of view. Knowledge sharing is easier to manage in a workplace where knowledge is valued and where attitudes give these processes both time and space.

Knowledge sharing involves individuals in interaction where the individual is affected by roles and situations. This means that social skills are important and that both persons and context must be managed together. It is not only a management issue to take care of all contextual, social, and cultural factors that affect knowledge sharing. The individual is still in focus and therefore education and training in knowledge sharing is equally relevant.

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